

given many proofs of the value and constancy of this character ('Annals,' Jan. and March; and Journ. Micr. Soc. Jan. 1864); but as they were chiefly drawn from Kentish plants, it seemed desirable to extend the inquiry to species grown in different localities. Accordingly Mr. W. H. Baxter, taking an intelligent interest in the subject, supplied me with fragments, from an old herbarium, calculated to afford a further test as to the raphidian character of British Galiaceæ. Some of these were marked "probably poisoned," and others "probably not poisoned;" and their names here follow on the excellent authority of that botanist:—CAPRIFOLIACEÆ: *Lonicera Periclymenum*, *L. Caprifolium*, *L. Xylosteum*, *Sambucus niger*, *S. Ebulus*, and *Viburnum Lantana*. GALIACEÆ: *Galium saccharatum*, *G. spurium*, *G. parisiense*, *G. montanum*, *G. sylvestre*, *G. tricornis*, *G. erectum*, *G. saxatile*, *G. uliginosum*, and *Asperula cynanchica*. VALERIANACEÆ: *Valeriana dioica*, *Centranthus ruber*, and *Fedia dentata*. These three orders are here placed as they stand together in the natural classification. After careful examinations, raphides were found in every one of the specimens of Galiaceæ, but could not be detected in any one of the two other orders. And this is the more remarkable, not only from the state of the dried fragments, but from the fact that the raphides of Galiaceæ are regularly smaller and less abundant than in many other plants (Onagraceæ, for example), as was well seen in comparing the small and scanty raphides of *G. saxatile* and *G. uliginosum* with the larger and more numerous raphides of other dried portions of several species of *Epilobium*. But such is the persistency of raphides, that I have regularly found them in dead stems, leaves, or roots of Onagraceæ and Mesembryanthaceæ which had been fully exposed to the destructive effects of the whole winter and spring; so that even these decayed fragments may thus be surely distinguished from others of allied orders.

Edenbridge, May 9, 1864.

[To be continued.]

BIBLIOGRAPHICAL NOTICES.

The Birds of India, &c. By T. C. JERDON, Surgeon-Major, Madras Army, Author of 'Illustrations of Indian Ornithology.' Vol. I. and Vol. II. Part 1. Calcutta: 1862, 1863. (London: Smith and Elder.)

WE have to apologize to Dr. Jerdon for having so long delayed to notice the valuable work he has published. But, in truth, it is not one to be hurriedly reviewed; for such a proceeding on our part would justly lay us open to the charge of insufficiently recognizing

its importance. It is now a considerable time since our expectations were excited by the news that, after our countrymen had for more than a century securely established themselves on "the shores of Ind," and for many years had pervaded the whole region lying between the Himalaya Mountains and Cape Comorin, we were at length to possess a concise manual of one portion of the fauna of Hindostan. The words of promise are being fulfilled, and there remains now but one more part to complete this useful work. The naturalist, however, can never afford to "rest and be thankful." Knowledge to him, of all men, is infinite, and its acquisition is "never ending, still beginning." Though we do most heartily congratulate our author on the successful issue of his laborious undertaking—or, at least, on having got the worst part of it over,—it is because we regard this book as furnishing a sure basis for future operations that we deem it one of such transcendent merit. The student who wished to become acquainted with the particulars of Indian ornithology had aforesaid to hunt up sporadic papers scattered throughout the publications or reports of we know not how many learned bodies either in Europe or Asia, most of these papers difficult of access, and some, we believe, utterly withdrawn from sight, except at the chief seats of government in the Indian peninsula or here in London. Now all this is changed. When the present work is completed, the "collector of Boggleywollah," if he be so inclined, will be able to start off to his up-country station with three not very thick octavos in his bullock-trunks, and the assurance that he has therein a compendium of all that has been already written on the subject. But on this point we must let Dr. Jerdon speak for himself, which he does with remarkable modesty as regards his own labours, and in cordial and most gratifying terms towards those of one who might almost have been considered a rival instead of a fellow-worker in the same field. Here are the opening paragraphs of his Preface:—

"The present work is the first of a series of manuals which the author proposes to bring out, if his health be spared, on the Natural History of the Vertebrated Animals of India. The want of such books has long been greatly felt in this country; and the increasing attention now paid to natural history calls, more imperatively, for the fulfilment of this desideratum.

"The author's uninterrupted residence for above a quarter of a century in India, during which period he has diligently examined the faunæ of the different districts in which he has been a resident or a traveller, has enabled him to give in detail, from personal observation, the geographic distribution and limits of most of the animals of this country; for, with the exception of the North-West Provinces, the Punjab, and Sindh, he has traversed and retraversed the length and breadth of the continent of India, and has also visited Burmah.

"This experience, and an earnest wish to be of use to naturalists and travellers in India, are the author's chief claims for attempting such an ambitious task; and, had others better qualified come forward, he would have relinquished, however unwillingly, what to him has

been a labour of love. He has, however, had the inestimable advantage of constant correspondence, and, in latter years, of personal intercourse, with Mr. Blyth, of the Asiatic Society's Museum, than whom no one would have been better qualified to write such a work, had his health been good and his time his own. But the constant drudgery of his unassisted labours, and above twenty-one years' residence in Calcutta, have so far injured his health as to preclude the present hope of his publishing a separate work. His voluminous writings, however—reports, notices, monographs, &c.—scattered through twenty volumes of the 'Journal of the Asiatic Society' and in various English scientific periodicals, are permanent proofs of his great talents and industry; and were it not for those writings and the fine collection he has been the chief means of making in Calcutta, the present work would be much more imperfect than it now is."

Of the manner in which Dr. Jerdon has performed his task we must speak in terms of high praise. The scheme of the book is exactly what we think it ought to be—"A Manual of Ornithology specially adapted for India," as it is announced on the title-page, which, as being somewhat redundant, we have taken the liberty to curtail above. To this end the Surgeon-Major prefixes an "Introduction," containing nearly fifty pages of well-digested generalizations, or, as we might almost term them, a summary of the first principles of ornithology. These serve to show, if, indeed, it were necessary, that our author has turned to good account the specific knowledge of which the body of the book proves him to be possessed—knowledge of a kind which so many naturalists, unfortunately, seem to be incapable of applying to higher purposes. But the utility of the "Introduction" is not merely confined to the demonstration of this fact. It is unquestionable, we think, that a book like the present, though long demanded by advanced naturalists throughout the world, has been most needed by a multitude of persons in our mighty pro-consulate—persons who know little of ornithology, though they love it much, amateurs who with the aid thus opportunely afforded them will ripen into ornithologists. Welcome, then, as the rains in their season, will be the 'Birds of India' to men with such tastes, thirsting for information on the subject, for lack of which many of them must have seen their aspirations wither like vegetation in a time of drought.

Our space will not admit of our going into details. We must beg our readers to take our word for it that we have tested the accuracy, so far as we have been able, of a good many of Dr. Jerdon's descriptions and diagnostic characters, and we find they stand the trial extremely well. Much of the book consists of matter the truth of which *ex necessitate* we cannot test, seeing that it embodies the results of the author's personal experience, and we lay no claim to a special knowledge of Indian ornithology. But Dr. Jerdon is obviously an observer so carefully trained that we willingly accept upon trust his statements respecting the habits, the movements, in a word, all that is really meant by the *history* of the birds of India. The greatest fault we have to find with the book (and we

must say we think it amounts to a serious fault) is the unnecessary multiplication of genera. It is perfectly true, as Dr. Jerdon states (Introd. p. xxxiv), that "in practice, and till the whole realm of ornithology is presided over by a master hand, no distinction [between genera and subgenera] can be satisfactorily pointed out, or acted upon." But on this very ground surely it would have been the more simple as well as the more convenient plan not to have acquiesced in the minute subdivisions which it has become the fashion of so many writers now-a-days to make. They cannot fail to be perplexing, if, indeed, they are not actually repugnant, to beginners. In justice, however, to Dr. Jerdon we are bound to say, and we say it with pleasure, that none of the subdivisions we complain of seem to be of his invention.

From what has been said at the beginning of this notice, it will be seen that we regard this work as the foundation of a new edifice to be raised on Indian soil by builders as yet unknown to fame. It can scarcely be seriously doubted, indeed, that its publication will be an effectual incentive to the study of ornithology in that country, and the results cannot fail to be gratifying to all promoters of the science. But from another point of view Dr. Jerdon's arduous labours merit great praise. The friends of the new system whereby the Indian Civil Service is replenished ought to hail our author as a benefactor to those who under it obtain government appointments. What can be worse for a young man, as highly educated as the successful candidates for these much-coveted offices are said to be, than to be banished to a remote post, far from the society of his countrymen, and with no rational employment whatever to occupy his mind after the daily routine of work is finished? He has not the stout bodily constitution, it is alleged, which generally distinguished the uncramped cadet of the ancient order of things. No wonder then that the "competition-Wallah" succumbs under the enervating influence of a tropical climate, and flies to "brandy-pawnee," or other things worse, as a refuge against the attacks of dull care. Dr. Jerdon has now placed within his reach the means of prosecuting a recreative occupation, healthful alike to mind and body, with the consciousness that in the enjoyment of it he may be able to swell—it matters not to how small an extent—the great and always increasing amount of human knowledge. This fact seems to have been appreciated by the last two enlightened rulers of India, Lords Canning and Elgin, under whose auspices these volumes have been undertaken and elaborated; and we learn with pleasure that the first of them, during his ever-memorable viceroyalty, placed the author "on special duty, with a view to the publication of the present work, thus giving him full leisure to devote to the completion of his researches and to the progress of the book through the press." We regret, however, to hear that of late Dr. Jerdon has been ordered by a subordinate official to return to his professional avocations; and whatever success may attend that gentleman's other measures, we feel sure that this step will prove to be a very short-sighted one, if it prevents the completion of the remaining manuals of the series which

the Surgeon-Major has promised us, merely (from a misguided motive of economy) to save a few rupees to the Indian treasury.

It only remains for us to say that the book, which has been printed in Calcutta, is most creditably got up*, and that we strongly recommend it to our readers.

A Flora of Ulster, and Botanist's Guide to the North of Ireland.

By G. DICKIE, M.D., Prof. of Botany, Aberdeen. 12mo. Belfast, 1864. London: Reeve & Co.

WE little thought, when noticing Mr. Tate's 'Flora Belfastiensis' in our April Number, to receive so soon another book treating upon the botany of the same part of Ireland, but extending its range considerably further. It might have been well if the authors had each known of the other's intention, as one book would have had more chance of success than two.

Dr. Dickie was resident for some years at Belfast, and then took notes of all the plants of which he ascertained the existence in the north of Ireland, by which he means that part of the island lying to the north of the 54th degree of latitude. In so defining his district we think that he has not been wise. It would have been better to confine himself to Ulster, and include the whole of that; for he has now omitted a small piece of two counties, Monaghan and Cavan. He would then have had a well-defined field in which to work: and if in this field he had divided his localities into groups, according to the three botanical provinces—28. Erne, 29. Donegal, and 30. Ulster Coast (which are laid down in the 'Proceedings of the Dublin University Zoological and Botanical Association,' i. 246, and the original 'Natural History Review,' vi. pt. 2. 533)—he would have facilitated the compilation of the much-wanted 'Cybele Hibernica.' It is true that we may arrange the localities for ourselves, if we think fit so to do; but there are many plants stated to be "frequent," of which it is impossible to learn, from the information given by Dr. Dickie, whether that frequency extends throughout Ulster or is more limited in extent. Certainly we do rather wonder that Dr. Dickie, who has shown the interest which he takes in the geography of plants by his most valuable remarks upon the altitude at which they occur, should have neglected to subdivide his country into districts, both here and in the 'Botanist's Guide to Aberdeen, &c.,' after the mode which has been found so useful in the more recent English local floras. We consider this a serious omission; and there is another deficiency which forcibly strikes us. Dr. Dickie manifestly takes no interest in what are called "critical" plants. It is the distribution of that class of "species" which we especially desire to learn; and there is nothing in this book to convey information on that subject.

* One clever gentleman of our own craft takes credit to himself for the discovery that Dr. Jerdon has, at page 16 of Volume I., made the mistake of calling the Condor *Sarcorhamphus papa*, and the King-Vulture *S. gryphus*, without acknowledging that this mistake is corrected in the author's own list of "Errata" prefixed to the volume!